

112.4 - Trace Elements (solid and wafer forms)

These SRMs are intended for calibrating instruments and evaluating analytical techniques used to determine trace elements in inorganic matrices.

NOTE: The nominal glass composition of SRMs 610 through 617 is 72% SiO₂, 12% CaO, 14% Na₂O, and 2% Al₂O₃.

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

Element (in mg/kg)

SRM Description	Unit of Issue	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Boron (B)	Cadmium (Cd)	Cerium (Ce)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Dysprosium (Dy)	Erbium (Er)	Europium (Eu)	Gadolinium (Gd)	Gallium (Ga)	Gold (Au)
606 Trace Elements in Basalt Glass	glass mounted in epoxy			174			14.6	315	48.3	86.5						
610 Trace Elements in Glass	4 wafers	415.3	340	453	(351)	244		415	(390)	444						(25)
611 Trace Elements in Glass	4 wafers	415.3	340	453	(351)	244		415	(390)	444						(25)
612 Trace Elements in Glass	4 wafers	34.9	37.4	38.6	(32)	29.9	(39)	35.0	35.5	37.7	(35)	(39)	(36)	(39)		(5)
613 Trace Elements in Glass	4 wafers	34.9	37.4	38.6	(32)	29.9	(39)	35.0	35.5	37.7	(35)	(39)	(36)	(39)		(5)
614 Trace Elements in Glass	4 wafers	(1.06)			1.30	(0.55)			0.73	1.37			0.99		(1.3)	(0.5)
616 Trace Elements in Glass	4 wafers	0.078			0.20					0.80					0.23	0.18
617 Trace Elements in Glass	4 wafers	0.078			0.20					0.80					0.23	0.18

In addition to the elements listed above, the SRMs 610 to 617 contain the following 23 elements: Be, Bi, Cs, Cl, F, Ge, Hf, Hg, Li, Lu, Mg, Nb, P, Pr, S, Tb, Te, Tm, Sn, W, V, Y, and Zr.

- Certified values are normal font
- Reference values are italicized
- Values in parentheses are for information only

112.4 - Trace Elements (solid and wafer forms)

These SRMs are intended for calibrating instruments and evaluating analytical techniques used to determine trace elements in inorganic matrices. NOTE: The nominal glass composition of SRMs 610 through 617 is 72% SiO₂, 12% CaO, 14% Na₂O, and 2% Al₂O₃.

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

		Element (in mg/kg)															
SRM	Description	Unit of Issue	Iron (Fe)	Lanthanum (La)	Lead (Pb)	Lithium (Li)	Manganese (Mn)	Neodymium (Nd)	Nickel (Ni)	Potassium (K)	Rubidium (Rb)	Samarium (Sm)	Scandium (Sc)	Selenium (Se)	Silver (Ag)	Strontium (Sr)	Thallium (Tl)
606	Trace Elements in Basalt Glass	glass mounted in epoxy		5.45	4.26								33.6			169	
610	Trace Elements in Glass	4 wafers	458		426	(488)	457		458.7	(461)	425.7			115.2	268	515.5	61.8
611	Trace Elements in Glass	4 wafers	458		426	(488)	457		458.7	(461)	425.7			115.2	268	515.5	61.8
612	Trace Elements in Glass	4 wafers	51	(36)	38.57	(40)	37.7	(36)	38.8	(64)	31.4	(39)		16.1	22.0	78.4	15.7
613	Trace Elements in Glass	4 wafers	51	(36)	38.57	(40)	37.7	(36)	38.8	(64)	31.4	(39)		16.1	22.0	78.4	15.7
614	Trace Elements in Glass	4 wafers	13.3	0.83	2.32				(0.95)	30	0.855		0.59		0.42	45.8	0.269
616	Trace Elements in Glass	4 wafers	11	0.034	1.85					29	0.100		0.026			41.72	0.0082
617	Trace Elements in Glass	4 wafers	11	0.034	1.85					29	0.100		0.026			41.72	0.0082

In addition to the elements listed above, the SRMs 610 to 617 contain the following 23 elements: Be, Bi, Cs, Cl, F, Ge, Hf, Hg, Li, Lu, Mg, Nb, P, Pr, S, Tb, Te, Tm, Sn, W, V, Y, and Zr.

- Certified values are normal font
- Reference values are italicized
- Values in parentheses are for information only